

REMARKS

The present application was filed on November 26, 2003 with claims 1 through 20. Claims 1 through 20 are presently pending in the above-identified patent application.

5 In the Office Action, the Examiner rejected claims 1-20 under 35 U.S.C. §103(a) as being unpatentable over Wang et al. (Clustering by Pattern Similarity in Large Data Sets, ACM SIGMOD' 2002 June 4-6, Madison Wisconsin, USA) in view of Brin et al. (Near Neighbor Search in Large Metric Spaces, Nov 20, 1995).

Independent Claims 1 and 18-20

10 Independent claims 1 and 18-20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Wang et al. in view of Brin et al. Regarding claim 1, the Examiner acknowledges that Wang teaches clustering by pattern similarity rather than defining subspace correlations between the objects to identify nearest neighbor, and asserts that Brin teaches a simplified algorithm (section 4.1 and pages 8-10) "wherein the
15 model of finding near neighbors in a large metric space wherein every data type has some degree of correlation in its distribution, it must be exploited to get good performance in a near neighbor search."

As the Examiner acknowledges, Wang is directed to clustering by pattern similarity. (See, Abstract.) While the processes of "clustering" and "finding the nearest
20 neighbor" share the concept of pattern similarity, the results of the processes are *not* the same, as would be apparent to a person of ordinary skill in the art. For example, in "clustering," a given set of datasets are processed and grouped into clusters. Once the clustering is completed, however, the nearest neighbor of a given data item is still not known. Thus, as the Examiner acknowledges, "clustering" and the Wang reference do
25 *not* disclose or suggest defining subspace correlations between two or more of the objects in the set based on the identified subspace pattern similarities for use in identifying near-neighbor objects.

In addition, while Brin discloses utilizing both correlated and uncorrelated data (Section 4.3), Brin does *not* disclose or suggest defining subspace correlations
30 *between two or more of the objects in the set based on the identified subspace pattern*

similarities for use in identifying near-neighbor objects. Independent claims 1, 19, and 20 require identifying subspace pattern similarities that the objects in the set exhibit in multi-dimensional spaces; and defining subspace correlations between two or more of the objects in the set based on the identified subspace pattern similarities for use in
5 identifying near-neighbor objects. Independent claim 18 requires defining subspace correlations between two or more of the objects in the set based on the identified subspace pattern similarities; and using the subspace correlations to identify near-neighbor objects among the query objects and the objects in the set.

Thus, Wang et al. and Brin et al., alone or in combination, do not disclose
10 or suggest identifying subspace pattern similarities that the objects in the set exhibit in multi-dimensional spaces; and defining subspace correlations between two or more of the objects in the set based on the identified subspace pattern similarities for use in identifying near-neighbor objects, as required by independent claims 1, 19, and 20, and do not disclose or suggest creating a pattern distance index to identify subspace pattern
15 similarities that the objects in the set exhibit in multi-dimensional spaces; defining subspace correlations between two or more of the objects in the set based on the identified subspace pattern similarities; and using the subspace correlations to identify near-neighbor objects among the query objects and the objects in the set, as required by independent claim 18.

20 Dependent Claims 2-17

Dependent claims 2-17 were rejected under 35 U.S.C. §103(a) as being unpatentable over Wang et al. in view of Brin et al.

Claims 2-17 are dependent on claim 1 and are therefore patentably distinguished over Wang et al. and Brin et al., alone or in combination, because of their
25 dependency from independent claim 1 for the reasons set forth above, as well as other elements these claims add in combination to their base claim.

All of the pending claims, i.e., claims 1-20, are in condition for allowance and such favorable action is earnestly solicited.

If any outstanding issues remain, or if the Examiner has any further
30 suggestions for expediting allowance of this application, the Examiner is invited to

contact the undersigned at the telephone number indicated below.

The Examiner's attention to this matter is appreciated.

Respectfully submitted,

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